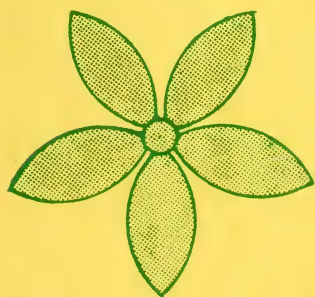
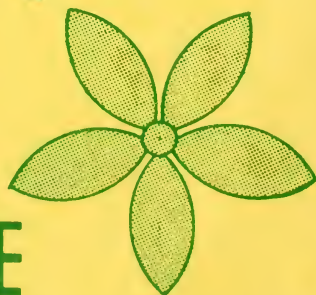


STATE
COLLEGE
at FITCHBURG

63



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CATALOGUE

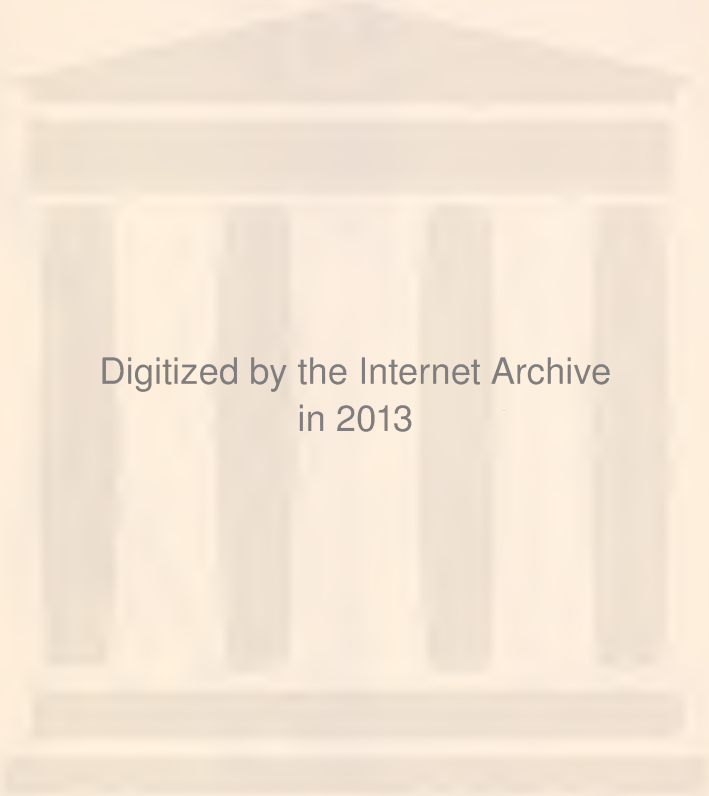
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State College at Fitchburg

Commonwealth
of Massachusetts

Established 1894

ACCREDITED BY
National Council for Accreditation of Teacher Education

MEMBER OF
The Eastern States Association of Professional Schools for Teachers
New England Association of Colleges and Secondary Schools
The American Association of Colleges for Teacher Education
The New England Teacher Preparation Association
Massachusetts Council on Teacher Education
Association of Teacher Education Institutions
National Commission on Accrediting

The Commonwealth of Massachusetts



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Department of Education, 200 Newbury Street, Boston, Massachusetts

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DR. WILLIAM E. PARK, Vice-Chairman
DR. LEO C. DONAHUE, Secretary
MRS. ROBERT A. PEDERSON
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DR. OWEN B. KIERNAN
Commissioner of Education

DR. JOHN GILLESPIE, Director
Division of State Colleges

DR. FRANCIS X. GUINDON, Assistant Director
Division of State Colleges



This college participates in the
National Defense Student Loan Program

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JOSEPHINE A. BOLGER, A.M.	Dean of Women, Psychology
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	Head of Social Studies Department
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THOMAS BATTINELLI, Ed.M.	Physical Education
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JOSEPH E. CARPENTER, Ed. M.	Industrial Arts
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JOHN P. CLARK, M.A.	Social Studies
MARION CLARK, A.M.	Physical Education
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NICHOLAS J. COPOULOS, Ed.M.	Mathematics
HARRY L. CROWLEY, Ed.D.	Psychology
VEVA K. DEAN, Ph.D.	Geography
RICHARD DECESARE, M.A.	Philosophy
DAYTON N. DENNETT, Ph. D.	English
EDWARD T. DONNELLY, Ed.D.	Industrial Arts,
	Supervisor of Industrial Arts Student Teachers
ADELE M. DRISCOLL, Ed.D.	Chairman of Education Department
EDWARD F. DRISCOLL, Ed.M.	Industrial Arts
JOSEPH F. DURANT, M.A.	Director of Student Teaching
	Secondary Schools
ROBERT G. ELLIOT, A.M.	Director of Athletics, Physical Education
WILLIAM H. FITZGIBBON, Ed.M.	Science
ROBERT B. FRITZ, A.M.	Art
WILLIAM J. GOLDMAN, Ed.D.	Head of Special Education Dept.
ROBERT W. GREENE, Ed.M.	Education
ERLING L. HANSON, Ed.M.	Industrial Arts
WALTER F. HARROD, Ed.M.	Industrial Arts
ELIZABETH M. HASKINS, S.M., M.A.T.	Mathematics
DANIEL L. HEALY, Ed.M.	English
RAYMOND G. HOOPS, M.A.	Industrial Arts
BARBARA HOWARD, B.S.	Nursing
RICHARD L. KENT, D.MUS.	Head of Fine Arts Department, Music
EVERETT E. KOEHLER, Ph. D.	Industrial Arts

WILLARD L. KOUKKARI, Ph.D.	Biology
THEODORE L. LAPIERRE, Ed. M.	Science
KARL R. LINDQUIST, Ed.M.	Science
ORIN A. LEONARD, Ed.D.	Psychology
MARY McDONALD LONG, Ph.D.	Head of English Department
ANNE MAY, Ed.M.	Special Education
JOHN B. McNANEY, Ed.M.	Science
JOHN F. NASH, Ed.M.	Social Studies
MARGARET M. NOONE, Ed.M.	Nursing
KATHARINE O'CONNOR, M.S.	Nursing
PIERRE L. PINET, M.A.	Languages and Social Studies
WILLIAM L. RINEHART, Ed.M.	Penmanship
MARY L. ROACHE, Ed.M.	Director of Student Teaching Elementary Schools
KATHERINE SEHL, Ed.D.	Director of Department of Nursing
HARRY SEMERJIAN, M.A.	Music
LOUIS P. SHEPHERD, A.M.	English
GEORGE F. STEFFANIDES, A.M., Ed.M.	Biology
LILLIAN TATER, Ed.M.	English
RENE J. THOMAS, M.S.	Industrial Arts
EVELYN WEACHTER, M.S. in L.S.	College Librarian
FRANK E. WOLF, Ed.D.	Biology

TRAINING SCHOOLS

JUNIOR HIGH

JOSEPH E. UNDERWOOD, Ed.M., Principal

SUPERVISORS

SIGNE ANTILA, Ed.M.	Geography
KATHRYN A. BAKER, Ed.M.	English and Latin
RICHARD F. CONDON, Ed.M.	Mathematics
RUTH M. DONOVAN, Ed.M.	Physical Education
JOSEPH C. FARIAS, Ed.M.	Industrial Arts
GERTRUDE FISKE, Ed.M.	Home Arts
ALFRED P. HOBBS, Ed.M.	Mathematics
ANNA F. PHILBIN, Ed.M.	English
EDWARD D. SULLIVAN, Ed.M.	Social Studies and Physical Ed.

DILLON SCHOOL

M. ELIZABETH O'CONNOR, Ed.M., Principal

BETTINA M. ASSELTA, Ed.M.	Grade 2
BARBARA A. JOHNSON, Ed.M.	Grade 5
DORIS V. LYSTILA, Ed.M.	Grade 3
RICHARD N. MARKHAM, Ed.M.	Grade 6
JANET W. MYER, Ed.M.	Grade 4

EDGERLY SCHOOL

ROBERT J. ARMSTRONG, Ed.M., Principal

HELEN CARNEY, Ed.M.	Grade 2
MARION B. CUSHMAN, Ed.M.	Grade 6
KATHERINE E. FLYNN, Ed.M.	Grade 2

DONALD FRANCIOSI, Ed.M.	Grade 5
EILEEN P. HARRINGTON, Ed.M.	Grade 4
ELIZABETH A. MANEY, Ed.M.	Grade 1
ROBERT S. McDERMOTT, Ed.M.	Grade 4
MARGARET M. McDOWELL, Ed.M.	Grade 1
IRENE M. PASSIOS, Ed.M.	Grade 3
ELIZABETH QUATTLANDER, Ed.M.	Grade 3
THERESA C. SKAMARYCZ, Ed.M.	Grade 5

MEDICAL OFFICERS

ROBERT A. RICE, M.D.	College Physician
MARGARET M. PETERSON, R. N.	Nurse

GENERAL PERSONNEL SUPERVISORS

CLAIRE LAVOIE	Principal Clerk
PAUL DUPONT	Chief Power Plant Engineer

THE STATE COLLEGE AT FITCHBURG

The State College at Fitchburg was originally established as a normal school under the provisions of Chapter 457, Acts of 1894 of the General Laws, and now offers the degrees of Bachelor of Arts, Bachelor of Science in Education, and Master of Education.

THE CAMPUS

The College, on the eastern fringe of the city, commands panoramic views of Mt. Wachusett to the south and Pearl Hill to the north. Of the eleven buildings on campus, there are three dormitories, which provide attractive living accommodations for men and women students; and three laboratory schools for children in grades one through nine. The State College Junior High School is the only training school of its type in the commonwealth.

Students at Fitchburg are fortunate to be in a progressive community and area rich in cultural, social, and religious activities; within easy travel of such important cities as Worcester, Boston, and New York; and in a vacation-land famed for its year-round beauty and sports.

BUILDINGS *

ADMINISTRATION AND LIBRARY (11): Offices of administration, Library, Main Auditorium, science and engineering classrooms and laboratories.

THOMPSON HALL (3): College classrooms, Alumni Office, Commuting Students' Lounge.

EDGERLY TRAINING SCHOOL (4): Grades one through six.

JUNIOR HIGH TRAINING SCHOOL (5): Grades seven through nine, Herlihy Auditorium.

THE DILLON TRAINING SCHOOL: (About a quarter-mile from the campus.) A city-owned but College-directed training school for grades one through six.

INDUSTRIAL ARTS BUILDING (7)

PARKINSON GYMNASIUM (8)

MILLER HALL (2): Dormitory for sixty-five women, office of the college nurse.

PALMER HALL (1): Dormitory for seventy-five women, College Cafeteria (open to all students, resident and commuting).

HERLIHY DORMITORY (10): Dormitory for 150 men, Dining Hall (for all resident students).

(NOTE CONCERNING STUDENT PARKING: When conditions warrant, parking space for student-owned cars may be available on campus, but it is not the obligation of the school to furnish such. The College administration disapproves of cars on campus which are not needed for work or for teacher-training travel.)

* Parenthetical numbers refer to aerial view of campus on pp. 22-23

STUDENT ORGANIZATIONS AND ACTIVITIES

Fitchburg State College offers enriching experiences through its twenty-six student organizations:

BAND	LOGOS HONOR SOCIETY (male)
CHEERLEADERS	MEN'S ATHLETIC ASSOCIATION
CLASS, FRESHMAN	MEN'S DORMITORY BOARD
CLASS, SOPHOMORE	MEN'S INTRAMURAL BOARD
CLASS, JUNIOR	NEWMAN CLUB
CLASS, SENIOR	SAXIFRAGE
COMMUTING BOARD	SPECIAL EDUCATION CLUB
DRAMATICS CLUB	S.T.E.A.M. (Student Teachers Education Association of Massachusetts).
EPSILON PI TAU (Industrial Arts honor society)	STUDENT CHRISTIAN ASSOCIATION
FORUM CLUB	STUDENT GOVERNMENT
GLEE CLUB	WOMEN'S ATHLETIC ASSOCIATION
HOST and HOSTESS CLUB	WOMEN'S DORMITORY BOARD
INDUSTRIAL ARTS CLUB	
KAMPUS VUE	

For male students there is interscholastic competition in soccer, basketball, track, and tennis with fellow members of the New England Teachers College Athletic Conference and other colleges, as well as in golf; while the men's intramural athletic program includes competition in soccer, touch-football, basketball, and softball. The Women's Athletic Association provides major interscholastic and intramural sports in field hockey, volleyball, basketball, and softball; other sports offered are archery, tennis, badminton, and bowling.

THE COLLEGE CURRICULA

The following curricula are offered at Fitchburg State College:

Elementary School Curriculum:

The Elementary School Curriculum is designed to prepare teachers for grades 1 through 6 of the elementary school. Academic courses, both prescribed and elective, provide the student with the basic content for teaching the curricular school subjects; and the professional courses develop an understanding of the characteristics of the young child, the content and organization of the modern elementary school program—with emphasis on unit procedures—and the specialized skills of the teacher of grades 1 through 6.

Final entrance into the Elementary Curriculum will depend upon a high standard in general scholarship during the first two years and upon the possession by the student of the traits of personality necessary for success in teaching children.

Secondary School Curriculum

The Secondary School Curriculum prepares students for teaching in the Junior and Senior High School. This preparation includes courses in both professional and subject matter areas to assure that the graduate is qualified to teach at the secondary level and that he meets the certification standards of the Commonwealth of Massachusetts.

Major areas of subject-matter specialization are available in English, science, mathematics, history, geography, and social studies. The candidate is required to specialize in one of the major areas and will frequently find it advantageous to build up a strong minor in one of the other areas.

Student teaching in the Secondary Curriculum is accomplished on campus in the Fitchburg State College Junior High School when possible. Students are also placed in senior and junior high schools, including regional schools, in the area near Fitchburg or, on occasion, in the area close to the student's home.

Industrial Arts Curriculum:

The Industrial Arts Curriculum prepares teachers for both junior and senior high schools. It is a balanced program of liberal arts, technical arts, and teacher education. A typical student's day includes both shop and academic classes. As is true of other teacher-preparation courses, there is a semester of supervised teaching, which is experienced in campus training schools and neighboring public schools.

The shops offer a great variety of technical experiences in woods, metals, printing, drawing, electronics, engines, vehicles, ceramics, leather, lapidary, finishing, and others. Industrial Arts students are required to take courses in all shops.

Nursing Curriculum:

The Nursing Curriculum is designed to prepare young men and women to function effectively upon completion of the program as practitioners of professional nursing in hospitals and community health agencies, and as leaders in working with others who are engaged in the practice of nursing in these types of health organizations. This undergraduate preparation in nursing affords a sound base upon which graduate study in nursing may be built.

The program is four academic years in length and leads to the baccalaureate degree. Courses in general education, including the humanities and behavioral, biological, and physical sciences, account for approximately one half of the 138 semester hours included in the program, and the courses in nursing and related professional subjects account for the other half of these semester hours. The courses in general education are concentrated mainly in the first two years, and the nursing and related courses are the major emphasis in the last two years, of the program.

Special Education for the Teaching of the Mentally Retarded:

This curriculum leading to a Bachelor of Science in Education degree prepares students for the teaching of the mentally retarded child. The program consists of both liberal arts and teacher education courses.

Methods best suited for teaching the normal as well as the retarded are considered. The available facilities of the college's Industrial Arts, Home Arts, and Science departments permit emphasis on the various types of application so valuable in the education of the retarded child. Practice teaching, clinical experiences, and directed observation will be completed in classes for the mentally retarded in local communities and state institutions.

Candidates completing this curriculum will fulfill the requirements of state certification for teachers in this field.

* * * * *

Admission to student teaching is based on the fitness and readiness of a candidate for teaching. Students who are adjudged to be unsuited will not be permitted to take student teaching.

CURRICULUM OUTLINES FOR TEACHER EDUCATION

This college provides the above general and professional study-and-practice experience through the following courses and allocation of hours:

CURRICULUM FOR ELEMENTARY TEACHERS

FIRST YEAR

1st Semester		2nd Semester	
	S.H. C.H.		S.H. C.H.
Eng. 100 English Composition I	3 3	Eng. 102 English Composition II	3 3
S.S. 100 Hist. West. Civilization I	3 3	S.S. 101 Hist. West Civilization II	3 3
Sc. 100 Biology I	3 4	Sc. 102 Biology II	3 4
Math. 110 College Math. I	3 3	Psych. 101 General Psychology	3 3
Mus. 101 Music I	2 4	Art 100 Art Appreciation	3 5
Eng. 106 Speech	2 2	P.E. 101 or 104 Phys. Ed. II	0 2
P.E. 100 or 102 Phys. Ed. I	0 2		
	16 21		15 20

SECOND YEAR

	S.H. C.H.		S.H. C.H.
Eng. 210 American Literature	3 3	Eng. 236 Children's Literature	3 3
Psych. 204 Child Psychology	3 3	Ed. 115 Arithmetical Concepts	3 3
Ed. 104 Cultural Hist. Am. Ed.	3 3	Ed. 200 General Methods	3 5
Mus. 102 Music II	1 2	S.S. 105 U.S. Hist. and Const.	3 3
Sc. 100 Physical Science I	3 4	Sc. 111 Physical Science II	3 4
S.S. 110 Prin. of Geography	3 3	or Elective	3 4
P.E. 103 or 106 Phys. Ed. III	0 2	P.E. 105 or 108 Phys. Ed. II	0 2
	16 20		15 20

THIRD YEAR

1st Semester		2nd Semester	
	S.H. C.H.		S.H. C.H.
Ed. 207 Reading in Elem. Grades	3 3	Ed. 210 Student Teaching	12 25
Ed. 205 Language Arts	2 2	Ed. 230 Seminar in Elementary Education	2 2
P.E. 110 Phys. Ed. in the Elem. School	1 2		
Art 200 Art in the Elem. School	2 4		
Mus. 200 Music in the Elem. School	2 4		
I.A. 203 Instructional Materials	2 4		
Psych. 203 Educational Meas.	2 2		
Sc. 233 Science in Elem. Ed.	3 4		
Ed. 220 Tech. Handwriting	0 1		
	17 27		14 27

FOURTH YEAR

1st Semester		2nd Semester	
	S.H. C.H.		S.H. C.H.
Phil. 203 Intro. to Philosophy	3 3	Phil. 204 Philosophy of Ed.	3 3
S.S. 222 Social Institutions	3 3	Eng. 215 English Literature	3 3
Sc. 111 Physical Science II	3 4	S.S. 210 Regional Geography	3 3
or Elective	3 3	Elective	3 3
Elective	3 3	Elective	3 3
Elective	3 3	Ed. 240 Orientation to Teaching	0 2
P.E. 202 Standard First Aid	0 1		
	15 17		15 17

CURRICULUM FOR SECONDARY SCHOOL TEACHERS

FIRST YEAR

1st Semester		2nd Semester	
	S.H. C.H.		S.H. C.H.
Eng. 100 English Composition I	3 3	Eng. 102 English Composition II	3 3
S.S. 100 Hist. West. Civilization I	3 3	S.S. 101 Hist. West. Civilization II	3 3
Sc. 100 Biology I	3 4	Sc. 102 Biology II	3 4
Math. 110 College Math. I or Math. 120 Algebra I	3 3	Math. 111 College Math. II or Math. 201 Trigonometry	3 3
S.S. 110 Prin. of Geography	3 3	Psych. 101 General Psychology	3 3
P.E. 100 or 102 Phys. Ed. I	0 2	P.E. 101 or 104 Phys. Ed. II	0 2
		Eng. 106 Speech	2 2
	15 18		17 20

SECOND YEAR

1st Semester		2nd Semester	
	S.H. C.H.		S.H. C.H.
Eng. 210 American Literature	3 3	Eng. 215 English Literature	3 3
Ed. 104 Cultural Hist. Am. Ed.	3 3	Psych. 202 Adolescent Psych.	3 3
Sc. 110 Physical Science I or Sc. 112 Chemistry I	3 3	Sc. 111 Physical Science II or Sc. 113 Physics I	3 3
P.E. 103 or 106 Phys. Ed. III	0 2	P.E. 105 or 106 Phys. Ed. IV	0 2
Elective	3 3	Elective	3 3
Elective	3 3	Elective	3 3
	15 17		15 17

THIRD YEAR

1st Semester		2nd Semester	
	S.H. C.H.		S.H. C.H.
Ed. 201 Methods and Materials in JHS Education	3 3	Ed. 211 Student Teaching	12 25
Ed. 204 Reading in the JHS	2 2	Ed. 232 Seminar in JHS Education	2 2
Psych. 203 Ed. Measurements	2 2		
Ed. 203 Methods in Areas of Sub- ject Specialization (choose one below)	2 2		
Mathematics in JHS			
English in the JHS			
Science in the JHS			
Social Studies in the JHS			
Elective	3 3		
Elective	3 3		
Ed. 220 Tech. Handwriting	0 1		
	15 16		14 27

FOURTH YEAR

1st Semester		2nd Semester	
	S.H. C.H.		S.H. C.H.
Art 102 Art Appreciation	3 3	Mus. 104 Music Appreciation	3 3
Phil. 203 Intro. to Philosophy	3 3	Phil. 204 Philosophy of Ed.	3 3
S.S. 195 U.S. History and Const.	3 3	S.S. 222 Social Institutions	3 3
Elective	3 3	Elective	3 3
Elective	3 3	Elective	3 3
P.E. 202 Standard First Aid	0 1	Ed. 240 Orientation to Teaching	0 2
	15 16		15 17

CURRICULUM FOR SPECIAL EDUCATION

FIRST YEAR

<i>1st Semester</i>		<i>2nd Semester</i>	
	S.H. C.H.		S.H. C.H.
Eng. 100 English Composition I	3 3	Eng. 102 English Composition II	3 3
S.S. 100 Hist. of Western Civ. I	3 3	S.S. 101 Hist. of Western Civ. II	3 3
Sc. 100 Biology I	3 4	Sc. 102 Biology II	3 4
Math. 110 College Math. I	3 3	S.S. 110 Prin. of Geography	3 3
Mus. 101 Music I	2 4	P.E. 101 or 104 Phys. Ed. II	0 2
P.E. 100 or 102 Phys. Ed. I	0 2	Art 100 Art Appreciation	3 3
Eng. 106 Speech	2 2		— —
	— —		15 18
	16 21		

SECOND YEAR

<i>1st Semester</i>		<i>2nd Semester</i>	
	S.H. C.H.		S.H. C.H.
Eng. 210 American Literature	3 3	Eng. 236 Children's Literature	3 3
Psych. 101 General Psychology	3 3	Psych. 222 Psych. of Subnormal	4 4
Sc. 110 Physical Science I	3 4	Sc. 111 Physical Science II	3 4
Ed. 104 Cult. Hist. of Amer. Ed.	3 3	S.E. 220 Home Arts	3 6
Mus. 102 Music II	1 2	Ed. 115 Arithmetical Concepts	3 3
P.E. 103 or 106 Phys. Ed. III	0 2	P.E. 105 or 108 Phys. Ed. IV	0 2
I.A. 224 Industrial Arts I	3 3		— —
	— —		16 22
	16 20		

THIRD YEAR

<i>1st Semester</i>		<i>2nd Semester</i>	
	S.H. C.H.		S.H. C.H.
S.E. 204 Methods of Teaching the Mentally Retarded	3 3	S.E. 230 Student Teaching	12 25
Ed. 208 Reading in Sp. Ed.	3 3		
P.E. 111 Phys. Ed. in Sp. Ed.	1 2		
Psych. 203 Ed. Measurements	2 2		
Mus. 200 Music in the Elem. Grades	2 4		
Sc. 238 Science in Sp. Ed.	3 4		
Art 200 Art in El. Grades	2 4		
Ed. 220 Handwriting	0 1		— —
	— —		12 25
	16 23		

FOURTH YEAR

<i>1st Semester</i>		<i>2nd Semester</i>	
	S.H. C.H.		S.H. C.H.
Phil 203 Intro. to Philosophy	3 3	Eng. 215 English Literature	3 3
S.E. 234 Guidance	3 3	Phil. 204 Philosophy of Ed.	3 3
S.S. 105 U.S. History & Const.	3 3	S.E. 235 Occupational Information	3 3
S.S. 222 Social Institutions	3 3	Elective	3 3
Elective	3 3	I.A. 227 Industrial Arts II	3 0
P.E. 202 Student First Aid	0 1	Ed. 240 Orientation to Teaching	0 2
	— —		— —
	15 16		13 20

CURRICULUM FOR INDUSTRIAL ARTS

FIRST YEAR

<i>1st Semester</i>				<i>2nd Semester</i>	
	S.H.	C.H.		S.H.	C.H.
Eng. 100 English Composition I	3	3	Eng. 102 English Composition II	3	3
Math. 110 College Math. I	3	3	Math. 111 College Math. II	3	3
I.A. 112 Design	3	3	Psych. 101 General Psychology	2	2
I.A. 110 A Technical Drawing I	2	4	I.A. 122A Electricity I	2	4
I.A. 105 A Woodworking I	2	4	I.A. 128 Crafts I	2	4
I.A. 115 A Metals I	2	4	I.A. 125 Power Mechanics I	2	4
I.A. 120 A Graphic Arts I	2	4	I.A. 130 A General Shop I	2	4
P.E. 102 Physical Ed. I	0	2	P.E. 104 Physical Ed. II	0	2
	17	27		17	27

SECOND YEAR

<i>1st Semester</i>				<i>2nd Semester</i>	
	S.H.	C.H.		S.H.	C.H.
Eng. 210 American Literature	3	3	Eng. 215 English Literature	3	3
Sc. 112 General Physics	3	4	Sc. 113 General Chemistry	3	4
I.A. 106 Woodworking II	3	6	I.A. Foundations of I.A. I 200	2	2
I.A. 111 Drawing II	3	6	I.A. 121 Graphic Arts II	3	6
I.A. 116 Metalworking II	3	6	I.A. 123 Electricity II	3	6
P.E. 106 Physical Ed. III	0	2	I.A. 136 Power Mechanics II	3	6
	15	27	P.E. 108 Physical Ed. IV	0	2
				17	29

THIRD YEAR

<i>1st Semester</i>				<i>2nd Semester</i>	
	S.H.	C.H.		S.H.	C.H.
I.A. 201 Principles and Practices in I.A.	4	4	I.A. 202 Founds. of I.A. II	2	3
Psych. 202 Adolescent Psych.	3	3	I.A. 225 Student Teaching	8	16
I.A. 205 Structures	3	6	Psych. 203 Tests & Measurements	2	2
I.A. 230 A General Shop II	2	4	Ed. 220 Handwriting	0	1
Elective Shop	3	6	Mus. 103 Music Appreciation	1	2
Eng. 106 Speech	2	2	P.E. 202 Standard First Aid	0	1
	17	25		13	25

FOURTH YEAR

<i>1st Semester</i>				<i>2nd Semester</i>	
	S.H.	C.H.		S.H.	C.H.
Phil. 203 Intro. to Philosophy	3	3	Phil. 204 Philosophy of Ed.	3	3
S.S. 225 Industrial Society I	3	3	S.S. 226 Industrial Society II	3	3
Elective Shop (Metal - Power - Electricity - Graphic Arts - Crafts)	6	12	I.A. 237 Mechanics (Mechanics and Power)	3	6
Elective	3	3	Elective Shop (Wood-Drawing-Electricity - Graphic Arts - Crafts)	3	6
S.S. 105 U.S. Hist. & Constitution	3	3	Elective	3	3
			I.A. 231 Seminar in I.A.	2	2
			Ed. 240 Orientation to Teaching	0	2
	18	24		17	25

CURRICULUM FOR NURSING

FIRST YEAR

1st Semester				2nd Semester			
	S.H.	C.H.			S.H.	C.H.	
Eng. 100 English Composition I	3	3		Eng. 102 English Composition II	3	3	
S.S. 100 Hist. West. Civilization I	3	3		S.S. 101 Hist. West. Civilization II	3	3	
Math. 100 College Math. I	3	3		Sc. 116 Physics	3	4	
Sc. 114 Chemistry I	3	4		Sc. 115 Chemistry II	3	4	
Psych. 101 General Psychology	3	3		S.S. 222 Social Institutions	3	3	
Eng. 106 Speech	2	2		Nurs. 100 Introduction to Nursing	2	2	
P.E. 100 Physical Education I	0	2		P.E. 101 Physical Education II	0	2	
	—	—			—	—	
	17	20			17	21	

SECOND YEAR

1st Semester				2nd Semester			
	S.H.	C.H.			S.H.	C.H.	
Eng. 210 American Literature	3	3		Eng. 215 English Literature	3	3	
S.S. 221 Contemporary Amer. Soc.	3	3		Psych. 206 Human Growth and Development	3	3	
Sc. 220 Microbiology	3	4		Nurs. 202 Nutrition	3	3	
Sc. 105 Anatomy and Physiology I	4	6		Sc. 106 Anatomy and Physiology II	4	6	
Nurs. 200 Foundations of Nursing	4	7		Nurs. 201 Foundations of Nursing	4	7	
P.E. 103 Physical Education III	0	2		P.E. 105 Physical Education IV	0	2	
	—	—			—	—	
	17	25			17	24	

THIRD YEAR

1st Semester				2nd Semester			
	S.H.	C.H.			S.H.	C.H.	
Nurs. 210 Medical-Surgical Nurs. *	14	26		Nurs. 211 Maternity Nursing * £	7	26	
Psych. 208 Ed. Psychology	3	3		Nurs. 212 Pediatric Nursing * £	7	26	
	—	—		Nurs. 220 Public Health Science	3	3	
	17	29			—	—	
					17	29	

FOURTH YEAR

1st Semester				2nd Semester			
	S.H.	C.H.			S.H.	C.H.	
Nurs. 213 Psychiatric Nursing * £	7	26		Nurs. 222 Advanced Medical-Surgical Nursing *	7	13	
Nurs. 221 Public Health Nurs. * £	7			Nurs. 223 Disaster Nursing *	2	2	
S.S. 105 U.S. History and Const.	3	3		Nurs. 225 Principles of Management *	3	3	
Art 101 Survey of Art Histoy	1	2		Nurs. 230 Nursing Seminar *	2	2	
	—	—		Phil. 203 Introduction to Phil.	3	3	
				Mus. 103 Music Appreciation	1	2	
	—	—			—	—	
	18	31			18	25	

* May be taken either semester.

£ Meets for 26 clock hours for a half semester.

CURRICULUM FOR ENGLISH MAJOR, EDUCATION MINOR, FOR A. B. DEGREE

FIRST YEAR

<i>1st Semester</i>				<i>2nd Semester</i>			
	S.H.	C.H.			S.H.	C.H.	
Eng. 100 English Composition I	3	3	Eng. 102 English Composition II	3	3		
U.S. 100 History of Western Civ. I	3	3	S.S. 101 History of Western Civ. II	3	3		
Math. 110 Mathematics I	3	3	Math. 111 Mathematics II	3	3		
Foreign Language	3	3	Foreign Language	3	3		
Mus. 103 Music Appreciation	3	3	Art 100 Art Appreciation	3	3		
P.E. 100 or 102 Physical Ed. I	0	2	Eng. 106 Speech	2	2		
	—	—	P.E. 101 or 104 Physical Ed. II	0	2		
	15	17		—	—		
				17	19		

SECOND YEAR

<i>1st Semester</i>				<i>2nd Semester</i>			
	S.H.	C.H.			S.H.	C.H.	
Eng. 101 World Literature I	3	3	Eng. 102 World Literature II	3	3		
Sc. 100 Biology I	3	4	Sc. 102 Biology II	3	4		
Foreign Language or Distributive Elective	3	3	Foreign Language or Distributive Elective	3	3		
S.S. 105 U.S. History	3	3	Psych. 101 General Psychology	3	3		
Eng. 210 American Literature	3	3	Eng. 215 English Literature	3	3		
P.E. 103 or 106 Physical Ed. III	0	2	P.E. 105 or 108 Physical Ed.	0	2		
	—	—		—	—		
	15	18		15	18		

THIRD YEAR

<i>1st Semester</i>				<i>2nd Semester</i>			
	S.H.	C.H.			S.H.	C.H.	
Ed. 215 Principles of Teaching	3	3	Ed. 203 Methods of Teaching Eng.	3	3		
Psych. 208 Educational Psychology	3	3	Psych. 202 Adolescent Psychology	3	3		
Sc. 110 Physical Science I	3	3	Sc. 111 Physical Science II	3	3		
Eng. 231 Historical Development of the English Language	3	3	S.S. 222 Social Institutions	3	3		
English Electives	6	6	Eng. 205 Elizabethan Literature	3	3		
	—	—		—	—		
	18	18		15	15		

FOURTH YEAR

<i>1st Semester</i>				<i>2nd Semester</i>			
	S.H.	C.H.			S.H.	C.H.	
Ed. 216 Student Teaching	6	12	Phil. 204 Philosophy of Education	3	3		
Phil. 203 Introduction to Phil.	3	3	S.S. 120 Introductory Economics	3	3		
English Electives	6	6	Eng. 207 Victorian Literature	3	3		
Ed. 106 American Secondary Ed.	3	3	English Electives	6	6		
	—	—	Ed. 240 Orientation to Teaching	0	2		
	18	24		—	—		
				15	17		

CURRICULUM FOR HISTORY MAJOR, EDUCATION MINOR, FOR A. B. DEGREE

FIRST YEAR

1st Semester		2nd Semester	
	S.H. C.H.		S.H. C.H.
Eng. 100 English Composition	3 3	Eng. 102 English Composition	3 3
S.S. 100 History of Western Civ. I	3 3	S.S. 101 History of West. Civ. II	3 3
Math. 110 Mathematics I	3 3	Math. 111 Mathematics II	3 3
Foreign Language	3 3	Foreign Language	3 3
Mus. 103 Music Appreciation	3 3	Art 100 Art Appreciation	3 3
P.E. 100 or 102 Phys. Education I	0 2	Eng. 106 Speech	2 2
		P.E. 101 or 104 Phys. Education II	0 2
	— —		— —
	15 17		17 19

SECOND YEAR

1st Semester		2nd Semester	
	S.H. C.H.		S.H. C.H.
Eng. 101 World Literature I	3 3	Eng. 102 World Literature II	3 3
Sc. 100 Biology I	3 4	Sc. 102 Biology II	3 4
Foreign Language	3 3	Foreign Language	3 3
or Distributive Elective		or Distributive Elective	
S.S. 110 Principles of Geography	3 3	Psych. 101 General Psychology	3 3
S.S. 206 U.S. History to 1820	3 3	S.S. 200 Geog. of U.S. and Canada	3 3
P.E. 103 or 106 Phys. Ed. III	0 2	P.E. 105 or 108 Phys. Ed. IV	0 2
	— —		— —
	15 18		15 18

THIRD YEAR

1st Semester		2nd Semester	
	S.H. C.H.		S.H. C.H.
Ed. 215 Principles of Teaching	3 3	Ed. 203 Methods of Tchng. Hist.	3 3
Psych 208 Educational Psychology	3 3	Psych. 202 Adolescent Psychology	3 3
Sc. 110 Physical Science I	3 3	Sc. 111 Physical Science II	3 3
S.S. 235 U.S. History to 1877	3 3	S.S. 222 Social Institutions	3 3
History Electives	6 6	S.S. 236 U.S. History to Present	3 3
	— —		— —
	18 18		15 15

FOURTH YEAR

1st Semester		2nd Semester	
	S.H. C.H.		S.H. C.H.
Ed. 216 Student Teaching	6 12	Phil. 204 Philosophy of Education	3 3
Phil. 203 Introduction to Phil.	3 3	S.S. 120 Introductory Economics	3 3
History Electives	6 6	S.S. 231 Political Science	3 3
Ed. 106 American Secondary Ed.	3 3	History Electives	6 6
	— —	Ed. 240 Orientation to Teaching	0 2
	18 24		— —
			15 17

COURSE DESCRIPTIONS

ART

Art 100. Art Appreciation

3 semester hours, 3 clock hours

Selected examples of architecture, painting, and sculpture from prehistoric periods to the present are studied as a part of Western man's cultural heritage. Emphasis is placed on the evolution of style in these areas.

Art 101. Survey of Art History

1 semester hour, 2 clock hours

This course is concerned with a study of selected art forms which represent the growth of Western culture. Each art form is examined in its historical setting and also in its relationship to the present.

Art 150. Art in Elementary Education

2 semester hours, 4 clock hours

In this laboratory course the student learns to work creatively with various materials. Emphasis is placed on translating these creative experiences into meaningful elementary-education practices.

Art 200. Classical Art

3 semester hours, 3 clock hours

The architecture, sculpture, painting, and minor arts of the ancient Mediterranean cultures are considered as a background for observing the unfolding of a classical style. The course includes the arts of Egyptian, Mesopotamian, Aegean, Etruscan, Greek, and Roman civilizations.

Art 201. Renaissance Painting

3 semester hours, 3 clock hours

This study of 13th through 17th century painting will include the works of such masters as Giotto, da Vinci, Michelangelo, Titian, Rembrandt, Vermeer, Poussin.

Art 202. Nineteenth Century Art

3 semester hours, 3 clock hours

The art of America and Europe from the French Revolution to 1900 is examined as an expanding movement which leads to a complete break with traditional art techniques in the 19th century. Field trips are assigned.

Art 203 Twentieth Century Art

3 semester hours, 3 clock hours

This examination of the art of the 20th century acquaints the student with the significant forms of his own period, with special reference to the impact of modern technology on those forms. Field trips are assigned.

Art 220. American Art

3 semester hours, 3 clock hours

Architecture, painting, sculpture, and decorative arts from the earliest colonial period to the present are studied. Field trips are assigned.

Art 225. Art of Asia

3 semester hours, 3 clock hours

This survey of Chinese, Japanese, and Indian art acquaints the students with Asian attitudes toward traditional concepts of architecture, painting, and sculpture. Emphasis is placed on the origin of these forms.

Art 230. Studio Course in Painting

3 semester hours, 4 clock hours

This course is designed to acquaint the student with the fundamental techniques of pictorial composition, basic drawing, and the handling of various painting media so that he may express his ideas in simple yet clear visual terms.

Art 231. General Drawing

3 semester hours, 4 clock hours

This is an introduction to drawing designed to develop basic skills in representation. A variety of techniques and materials are investigated. Related to this is a consideration of old and modern master drawings.

**EDUCATION
ELEMENTARY EDUCATION**

Ed. 104. Cultural History of American Education

3 semester hours, 3 clock hours

This course examines the origin and development of American schools, both public and private, in the context in which they operate. Emphasis is placed on early colonial schools, influence of leading educators, design of American education, and current trends and practices.

Ed. 115. Mathematical Concepts (Required course for students registered in the Elementary or Special Education Curriculum)

3 semester hours, 3 clock hours

This course includes a study of the equipment and techniques which are useful in illustrating mathematical concepts in elementary education. A logical development of the structure of elementary school mathematics is included as background material.

Ed. 200. General Methods of Elementary Education

3 semester hours, 5 clock hours

This course deals with defining elementary education and its objectives. Emphasis is placed on psychological guides to learning, lesson planning, unitary procedure, classroom management, and elementary school guidance services. Demonstrations are observed in the training schools.

Ed. 205. Language Arts in the Elementary School

2 semester hours, 2 clock hours

This course deals with the four aspects of a total program in language-arts listening, speaking, writing and creativity. It stresses the building of desirable standards of speaking and writing suitable to the child's level of development.

Ed. 206. Social Studies

3 semester hours, 3 clock hours

This course furnishes information about different approaches to curriculum and teaching procedures in social studies in elementary education. The unit and the use of maps, charts, and graphs are demonstrated. The student is made cognizant of current research..

Ed. 207. Reading in the Elementary School

3 semester hours, 3 clock hours

This course deals with the problems and methods of teaching reading in the primary and elementary grades, presenting suggested procedures for each stage of the pupil's development. Many basic reading series are examined and studied.

Ed. 210. Student Teaching in the Elementary School

12 semester hours, 25 clock hours

Students are assigned to two grade levels, nine weeks each, for a continuous 18-week period. During the semester the student teaches in a modern elementary school under the guidance of experienced teachers.

Ed. 230. Seminar in Elementary Education

2 semester hours, 2 clock hours

Taken concurrently with student teaching, this course includes weekly discussions of experiences and problems encountered in real classroom situations.

Ed. 240. Orientation to Teaching

0 semester hours, 2 clock hours

This course is designed to develop further knowledge of the relationships of teaching. Community resources and relationships, certification, placement, professional societies, professional ethics, opportunities for advancement, sources of assistance are investigated. General sessions and sessions in specific fields are held.

SECONDARY EDUCATION

Ed. 104. Cultural History of American Education

3 semester hours, 3 clock hours

(See description under ELEMENTARY EDUCATION.)

Ed. 201. Principles and Practices of Secondary Education

3 semester hours, 3 clock hours

The objectives of this course are competence in basic principles of teaching and learning in the secondary school. Lesson planning, teaching techniques, and unit method of organization are emphasized. Topics include: educational objectives, types of materials, evaluation of learning.

Ed. 203. Methods and Materials in Areas of Subject Specialization

2 semester hours, 2 clock hours

Candidates for Secondary School teaching certificates must elect one special methods-course, carrying two semester hours of credit, in the subject field in which they intend to specialize. These subject fields are: English, Social Studies, Science, and Mathematics.

Ed. 204. Reading in the Secondary School

2 semester hours, 3 clock hours

This is a developmental reading course. The purpose of the course is to present the fundamental principles of reading instruction together with discussions of causes, diagnosis, and remedial treatment of cases with varying degrees of disability.

Ed. 211. Student Teaching in the Junior High School

12 semester hours, 25 clock hours

Students are assigned to laboratory school for a semester of student teaching in their specialized field. Under trained supervision, responsibility is gradually assumed for planning and executing the educational program, utilizing resources of scholarship and principles of teaching and learning.

Ed. 220. Technical Handwriting and Handwriting Methods

This course offers technical training in cursive handwriting and hand-lettering with emphasis on the importance of blackboard writing in the teaching profession. Handwriting methods that are applicable to any handwriting system are studied, also handwriting materials.

Ed. 232. Seminar in Secondary School Education

2 semester hours, 2 clock hours

This course, taken concurrently with practice teaching, includes an analysis of the experiences of training, with emphasis on problems in the learning process. Professional ethics, Massachusetts school law, professional personnel policies, and career problems are considered.

Ed. 240. Orientation to Teaching

0 semester hours, 2 clock hours

(See description under ELEMENTARY EDUCATION)

P.E. 210. Coaching and Officiating (Separate courses for men and women)

Principles and techniques of coaching and officiating major sports of junior and senior high schools, rules and their application to game situations, and methods of adapting activities to limited facilities are studied.

ENGLISH

Eng. O. Remedial English

0 semester hours, 2 clock hours

This remedial non-credit course in the basic mechanics of correct English provides individual and group instructions for students judged by standard tests to need improvement in their ability to express their thoughts clearly and correctly in written work.

REQUIRED COURSES**Eng. 100. English Composition I**

3 semester hours, 3 clock hours

The principles and usages of correct English are studied and practiced through the frequent writing of themes, based upon the reading and critical discussion of literary selections.

Eng. 102. English Composition II

3 semester hours, 3 clock hours

The second composition course requires advanced study and practice of correct English expression, with more complex writing assignments based on types of literature read; a project in formal letters; a research paper that stresses the techniques of using reference material.

Eng. 236. Children's Literature (Required for Elementary and Special Education curricula)

3 semester hours, 3 clock hours

A study is made of basic criteria to evaluate children's literature; to emphasize skills in story-telling; to know source materials; to encourage book clubs, book fairs, school and classroom libraries; to consider related areas; to develop wider reading.

Eng. 210. American Literature

3 semester hours, 3 clock hours

The study of representative selections from the writings of colonial times to the present aims to give the student a better understanding and appreciation of social, intellectual, and literary trends in the United States.

Eng. 215. English Literature

3 semester hours, 3 clock hours

This course surveys English literary history from the Anglo-Saxon period to the present, emphasizing the major British writers and their work.

Eng. 106. Speech

2 semester hours, 3 clock hours

In this course, the student is introduced to the effective organization and delivery of speeches, oral interpretation of literature, and the techniques of intelligent criticism. In group work, he participates in forums, panel discussions, and parliamentary procedure.

Eng. Remedial Speech

0 semester hours, 2 clock hours

A non-credit course is offered to those students who did not make sufficient progress in correcting basic speech flaws observed in Speech I. Each student has opportunities for individual consultation.

ELECTIVES AND SPECIAL FIELD REQUIREMENTS

The following courses are offered in rotation as electives. Candidates majoring in English must select under guidance a minimum of 18 semester hours from the following list to complete a minimum total of 30 semester hours of credit in the field. No English course for which the student has received a grade of less than 2.0 will be counted toward this requirement.

Eng. 101. World Literature I: From Homer through the Eighteenth Century

3 semester hours, 3 clock hours

Literary masterpieces from the Greek classics through the writings of the eighteenth century that exemplify the ideas and ideals of civilized people and show the contributions of the Western World to our modern society form the basis of this course.

Eng. 219. The Novel before World War I

3 semester hours, 3 clock hours

Significant novels written before World War I, representing various countries and periods as well as stages in the development of a literary form, are studied both as social documents and works of art.

Eng. 220. The Modern Novel

3 semester hours, 3 clock hours

The international novel from the First World War through today is studied both as a literary form and as an attempt by man to understand his psychological, social, and spiritual problems.

Eng. 221. The Short Story

3 semester hours, 3 clock hours

Short fiction, including the episode, tale, and novella, and emphasizing the modern short story since Poe, is studied both as an art form and as a medium for the portrayal of personal relationships in various countries and periods.

Eng. 223. Modern Poetry

3 semester hours, 3 clock hours

This study of representative modern poetry will place the emphasis upon the writings of contemporary American and English poets.

Eng. 231. Historical Development of the English Language

3 semester hours, 3 clock hours

The nature and development of the English language, its structure, etymology, morphology, multilingual vocabulary, and position in relation to other languages, will be studied for an understanding of the political, social, and cultural influences upon our native tongue.

FRENCH

All French courses must be taken on a two-semester basis to obtain the full six credit hours. Students in the Liberal Arts program using French for their language requirement must take French 101 through French 104.

Fr. 100A. French for Beginners (Elective)

3 semester hours, 3 clock hours

This course aims to develop through the aural-oral approach correct pronunciation, reading ability, and fundamentals of grammar and syntax. French gradually becomes the working classroom language.

Fr. 100B. French for Beginners (Elective)

3 semester hours, 3 clock hours

This course is a continuation of French 100A (see above).

Fr. 101. French I. (Elective)

3 semester hours, 3 clock hours

This course includes remedial pronunciation, grammar review, conversation practice, and readings stressing life, customs, and culture of France. **Prerequisite: Two years of high school French or French 100A and B and/or satisfactory score on Placement Test.**

Fr. 102. French II. (Elective)

3 semester hours, 3 clock hours

This course is a continuation of French 101 (see above).

Fr. 103. French III. (Elective)

3 semester hours, 3 clock hours

This course deals with French Civilization as seen through modern literature. **Prerequisites: Placement and/or instructor's permission**

Fr. 104. French IV. (Elective)

3 semester hours, 3 clock hours

This course is a continuation of French 103 (see above).

INDUSTRIAL ARTS

I.A. 105 A. Woodworking I

2 semester hours, 4 clock hours

This course emphasizes the individual project method in bench work and a limited amount of machine work. Technical knowledge about tools, materials, processes, and design is stressed. Experiences are centered around the making of articles of utility and recreation.

I.A. 106. Woodworking II

3 semester hours, 6 clock hours

This is a course in furniture woods, design, construction, and finishing. Hand-tool skill is furthered along with machine techniques. Individual pieces of small furniture are designed, constructed, and finished.

I.A. 110 A. Technical Drawing I

2 semester hours, 4 clock hours

The fundamentals common to industrial drawing such as lettering, dimensioning, orthographic projection, symbols, sectioning isometric and auxiliary views are studied and developed. Problem development and blueprint reading are related to classwork.

I.A. 111. Technical Drawing II

3 semester hours, 6 clock hours

This course is a continuation of fundamentals in the field of intersection and developments, revolutions, axonometrics, perspectives, assembly, and detail drawing. Emphasis is likewise given to chalkboard techniques.

I.A. 112. Design

3 semester hours, 6 clock hours

The art heritage of Western civilization, as well as contemporary art sources, is surveyed as background for the study of design. The aims, elements, and principles of design are analyzed and approached through the problem method.

I.A. 115 A. General Metals I

2 semester hours, 4 clock hours

This course involves the study of the processing of certain metals from their ores emphasizing foundry techniques, principles of engine lathe operation, and elements of heat treatment of steel. Instruction and practice in the use of precision measuring instruments is offered.

I.A. 116. General Metals II

3 semester hours, 6 clock hours

This course provides instruction and practice in the use of metalworking machine tools and processes, as well as in arc welding, with an opportunity for design and fabrication of products which involve skill in machining or welding.

I.A. 120 A. Graphic Arts I (Introduction to Letterpress Printing)

2 semester hours, 4 clock hours

This beginning course is designed to give broad understanding of the graphic arts industry and its relationship to education. Emphasis is placed on hand composition, typography, fundamental operations, terminology, proof marks, printers' measurements, and introduction to platen press operation.

I.A. 121. Graphic Arts II (Special Methods of Reproduction)

3 semester hours, 6 clock hours

Letterpress printing is reviewed by use of a press project. Experiences in special processes in graphic reproduction include linoleum and wood block printing, silkscreen, drypoint engraving, thermography, marbling, flocking, rubber stamps, bookbinding, photography, and papermaking.



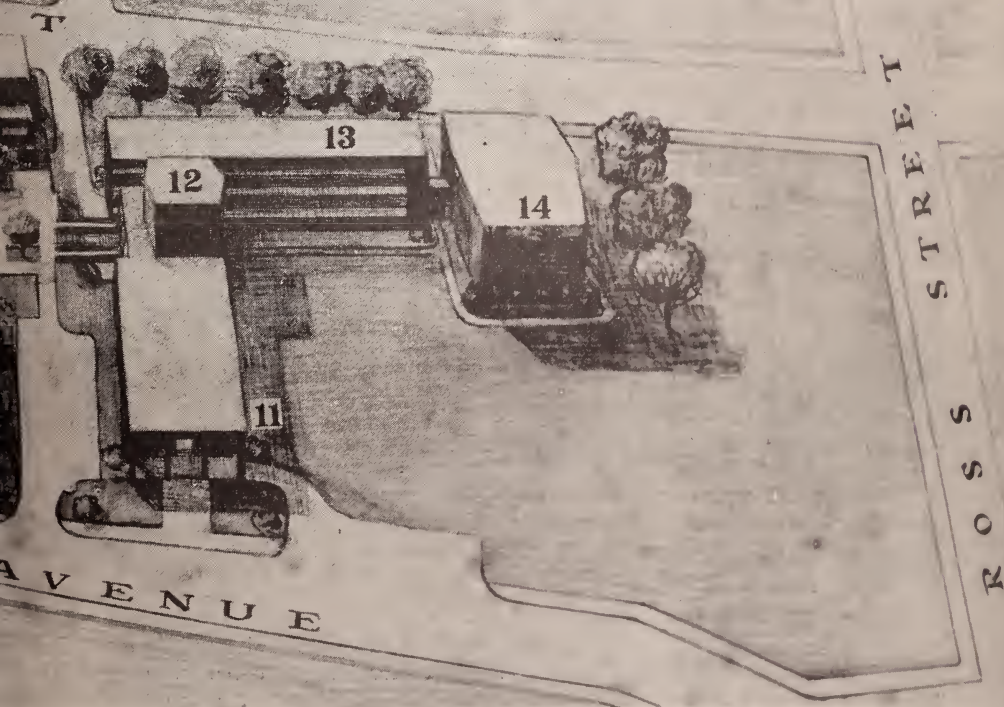
1. Palmer Hall
2. Miller Hall
3. Thompson Hall
4. Edgerly
5. Junior High

6. Heating Plant
7. Industrial Building
8. Gymnasium
9. Herlihy Dining Hall
10. Herlihy Dormitory

FITCHBURG STATE COLLEGE

FITCHBURG, MASSACHUSETTS

Aerial View OF THE *Main Campus*



- 11. Administration & Library
- 12. Lecture Hall
- 13. Science
- 14. Auditorium
- 15. Maintenance

I.A. 122. Electricity I

2 semester hours, 4 clock hours

This course deals with fundamental principles of direct current electricity and magnetism plus applications of these principles to circuits and devices. Verification of these principles is made by means of experiments, demonstrations, and wiring problems.

I.A. 123 Electricity II

3 semester hours, 6 clock hours

This course provides for the further application of DC c/t principles covered in Electricity I in a number of practical circuit problems together with the study of AC circuit fundamentals, electromagnetism and electromagnetic induction. This study is supplemented by experiments and tests performed with motors, generators, transformers, controls, and various types of drives .

I.A. 125. Power Mechanics I

2 semester hours, 4 clock hours

This is a first course in elementary mechanics. The modern automobile and its internal combustion engine serve as a vehicle to present the fundamental principles of basic machines. Certain prescribed experiments are required.

I.A. 128. Crafts I

2 semester hours, 4 clock hours

This course is an introduction and exploration of the major craft areas. The tools, materials, and processes related to leatherwork, ceramics, art metal, jewelry, enameling are studied. Projects are individually designed and executed in each area.

I.A. 130 A. General Shop I

2 semester hours, 4 clock hours

An introductory experience in methods and procedures of conducting teaching units in a multiple-activity shop. Students sample, at their level, units normally carried on in teacher-training assignments. Basic skills and techniques are applied. Originality and initiative are encouraged.

I.A. 136. Power Mechanics II

3 semester hours, 4 clock hours

The functioning, testing, and adjusting of the internal combustion engine, with emphasis on consumer education, is considered. Such engines as grasscutters, scooters, outboards, and cars are studied.

I.A. 200. Foundation of Industrial Arts I

2 semester hours, 2 clock hours

A comparative study is made of the educational theories, the social and academic setting, and the leaders of each period of industrial arts history from manual training to the present with emphasis on the major contemporary viewpoints of industrial arts.

I.A. 201. Principles and Practices in Industrial Arts

4 semester hours, 4 clock hours

Principles underlying methods of planning and guiding learning activities with special emphasis on problem solving, the project method and unitary teaching, plus the effective application of these methods to industrial arts teaching are examined.

I.A. 202. Foundations of Industrial Arts II

2 semester hours, 2 clock hours

An overview of the social and philosophical foundations of American public education is undertaken with emphasis on curriculum theories and their application to the structure and organization of industrial arts in general education.

I.A. 203. Instructional Material in Elementary Education

2 semester hours, 4 clock hours

Students are given experiences in rudiments of planning, drawing, and construction of a variety of visual aids appropriate to the elementary grades. Emphasis is given to selected techniques of fabricating materials common to unit activities in the elementary school.

I.A. 205. Structures (Architectural Drawing and Wood Structures)

3 semester hours, 6 clock hours

This course includes basic principles and assumptions of structural design including making drawings, models, and full scale structures. An analysis is made of ordinary structural members, frames, and trusses. Load tests are made determining reactions, shears, bending moments, and stresses.

I.A. 206. Woodworking IV

3 semester hours, 6 clock hours

This course features experiences in the production of high grade furniture, employing jigs, fixtures, and suitable mass production procedures. Appropriate methods of production management are used and studied. Students participate in the planning and management of procedures and devices.

I.A. 207. Woodworking V

3 semester hours, 6 clock hours

This course is intended for students who have proved their ability and wish to specialize in woodworking. It consists of tool and machine maintenance, designing and making teaching aids, and experimentation in wood technology and project development.

I.A. 210. Technical Drawing III

3 semester hours, 6 clock hours

This study of architectural design gives experiences in architectural drawing. Assignments include structural design related to both architecture and transportation. Related print reading and model making in some of these phases are part of the required class and outside preparation.

I.A. 211. Technical Drawing IV

3 semester hours, 6 clock hours

This course is based upon the needs of the advanced students in technical drawing. Problems in machine assembly based on cam design and gearing will be stressed. Experiences in various technical illustration methods, using different media, will be offered.

I.A. 212. Descriptive Geometry

3 semester hours, 6 clock hours

In this phase of drawing, problems both abstract and practical are worked out graphically, based on sound facts, taught by logical reasoning. Visualization problems dealing with the concept of locus are also employed.

I.A. 215. General Metals III (Elective)

3 semester hours, 6 clock hours

Instruction and practice in welding and brazing is provided for advanced students of metals with production of weldments as an integral part of an experience involving advanced operations on machine tools and industrial production methods.

I.A. 216. Metals IV (Elective)

3 semester hours, 6 clock hours

Instruction is given in fundamentals of physical metallurgy including the theory of crystallization and the relation between crystalline structures and physical properties of metals, preparation by polishing and etching of metallic specimens for examination by microscope, principles of heat treatment.

I.A. 220. Graphic Arts III (Offset Lithography and Advanced Shop Practice)

3 semester hours, 6 clock hours

Practice is given in offset copy preparation, process camera operation, opaquing and stripping of negatives, platemaking, and operation of the Davidson Press. Experience is gained in following a job on the Kluge Automatic or Whitlock Cylinder, through the folder, stitcher, and perforator.

I.A. 221. Graphic Arts IV (Advanced Special Processes)

3 semester hours, 6 clock hours

This final integrative experience in solving advanced problems in special processes and rounding out one's graphic arts experiences in preparation for teaching, uses airbrush techniques, metal etching, photographic silkscreen, and other media. Production printing continues and darkroom facilities are available.

I.A. 222. Electronics I

3 semester hours, 6 clock hours

This is a course in basic electronic principles and their applications in electronic devices. The study of theory is supplemented by the construction and testing of various circuits which illustrate applications of basic principles.

I.A. 223. Electronics II

2 semester hours, 6 clock hours

Study and laboratory work deal with further applications of electronic principles introduced in Electronics II as they apply to power supplies, test equipment, photo-electric and other devices, plus an introduction to transistor theory and practice and FM receivers.

I.A. 224. Industrial Arts I (Required for Special Education)

3 semester hours, 6 clock hours

Students are given experiences in rudiments of planning, drawing, construction, and use of a variety of visual materials. A laboratory approach is made through projects to attain background in the tools, materials, and processes appropriate to this type of teaching.

I.A. 225. Student Teaching in Industrial Arts

8 semester hours, 16 clock hours

Each student is directly responsible for planning, teaching, and managing a given number of classes either in the campus junior high school or selected public school shops under the supervision of an experienced teacher. Weekly conferences are held for counsel and guidance.

I.A. 227. Industrial Arts II (Required for Special Education)

3 semester hours, 6 clock hours

This course provides rudimentary technical knowledge and skill in selected areas of industrial activity for the purpose of providing special education teachers sufficient technical background essential for realistic occupational guidance and beginning employment competence. Additional appropriate areas will be explored.

I.A. 228. Crafts II

3 semester hours, 6 clock hours

This advanced course provides an opportunity to gain depth and enrichment in two or more craft areas. The program is designed to meet the needs and interests of the student in such media as leather, clay, art metals, enamels, and textiles.

I.A. 230. General Shop II

3 semester hours, 6 clock hours

Considered are laboratory experiences with common theories and practices of the general shop; with emphasis on organization including personnel systems, individualized activities, preparation of instructional materials, analysis of criteria for project selection, and application of the unit method to student teaching assignments.

I.A. 231. Seminar in Industrial Arts

2 semester hours, 2 clock hours

Principles and practices of shop administration including shop planning, finances, equipment, storage, maintenance, and records are studied. Students are required to express their interpretation of industrial arts in some appropriate problem which reflects their individual needs and interests.

I.A. 235. Experimentation in Industrial Arts

3 semester hours, 6 clock hours

This is a course for selected students who have proved their ability in design and craftsmanship. The major portion of the course is devoted to developing an original design, carrying on the necessary research, and completing a project. The facilities of the entire department and staff are available for this course.

I.A. 226 Power Mechanics III

3 semester hours, 6 clock hours

This is a developmental course for those who are seeking more information in, and who intend to pursue, mechanical interests. Aspects of sound, television, refrigeration, hydraulics, meters, thermostats, recorders, and thrust engines are studied as they pertain to Industrial Arts.

I.A. 237 Mechanics and Mechanisms

3 semester hours, 6 clock hours

A study of motions and mechanical elements that comprise the basic mechanisms of machinery. Practical applications will be made in selected areas of cam design, pulley drives, gear trains, machine linkages and other pertinent mechanisms.

MATHEMATICS

Math. 0. Remedial Mathematics

2 clock hours, no credit

Students are assigned to this section on the basis of demonstrated need for remedial work.

Math. 110. College Mathematics I

3 semester hours, 3 clock hours

The logical nature of mathematics and mathematical operations is emphasized. The following topics are included: number systems and operations, sets and set operations, algebra, numeration, computation, and functions.

Math. III. College Mathematics II

3 semester hours, 3 clock hours

Topics from coordinate geometry, trigonometry, and algebra are included in this course. **Prerequisite: Math. 110.**

ELECTIVES AND SPECIAL FIELD REQUIREMENTS

Candidates for secondary teaching certificates in mathematics must select courses from those listed below to complete a minimum of 18 semester hours of credit in the field. The mathematics faculty in charge of counseling students in the field may prescribe additional courses in the field.

Math. 120. Algebra I

3 semester hours, 3 clock hours

Functions and graphs, logarithms, progressions, irregularities, binomial theorem and mathematical induction, theory of equations, partial fractions, permutations and combinations, probability, and determinants are topics included in this course. **Prerequisite:** Math. 110.

Math. 200. An Introduction to Abstract Algebra

3 semester hours, 3 clock hours

A variety of topics are introduced, including integral domains, equivalence relations, congruences, groups, and matrices. **Prerequisite:** Math. 110.

Math. 201. Trigonometry

3 semester hours, 3 clock hours

The analytical aspects of trigonometry are emphasized in this course. Vectors, complex numbers, the trigonometric ratios, trigonometric identities and equations, trigonometric functions, and the solutions of triangles are considered. **Prerequisite:** Math. 110.

Math. 202. Analytic Geometry

3 semester hours, 3 clock hours

Coordinate systems, sets and relations, graphs of relations, algebraic descriptions of loci, the straight line, the conics, transformations of coordinates, functions and their graphs are considered. **Prerequisite:** Math. 110.

Math. 203. Differential Calculus

3 semester hours, 3 clock hours

The meaning and geometric interpretation of the derivative, the development of formulas for the differentiation of elementary functions, maxima-minima problems, related time-rate problems, and the antiderivative are topics included in this course. **Prerequisite:** Math. 204.

Math. 206. Integral Calculus (Given in alternate years)

3 semester hours, 3 clock hours

The law of the mean, the definite integral and the fundamental theorem of calculus, the techniques of integration of elementary functions, areas, volumes of revolution, and lengths of plane curves are topics in this course. **Prerequisite:** Math. 203.

Math. 207. An Introduction to Modern Geometry (Given in alternate years)

3 semester hours, 3 clock hours

Euclidean geometry is discussed as an axiomatic system, non-metric projective geometry and coordinative projective geometry are developed, and the three geometries are compared. Emphasis is placed upon harmonic sets and cross ratio as reoccurring concepts in all three geometries. **Prerequisite:** Math. 110

Math. 208. Probability and Statistics

3 semester hours, 3 clock hours

Sophisticated counting techniques, probability theory in finite sample spaces, random variables, expectations, means, variances, binomial and normal distributions, statistical inference, and sampling theory are topics included in this course. **Prerequisite:** Math. 120 or the equivalent.

MUSIC**Music 101. Music I**

2 semester hours, 4 clock hours

The student is helped to review the rudiments of music and to become acquainted with a wide variety of great music through singing and listening. The class time given to these respective activities is approximately in the ratio of one to two.

Music 102. Music II

1 semester hour, 2 clock hours

The student's skill and understanding are extended in this intermediate course, which is conceived both as a continuation of Music 101 and a preparation for Music 200.

Music 103. Music Appreciation

1 semester hour, 2 clock hours

Music from the 16th century to the present is included. The approach is through simpler forms to the larger musical forms, with the purpose of providing as wide an acquaintance with music literature as is practicable.

Music 104 The Art of Music (Secondary curriculum)

3 semester hours, 3 clock hours

Acquaintance with representative works from the music literature of past and present is the objective of this course. Students will pursue individual listening, concert-going, and research projects.

Music 200. Music in Elementary Education

2 semester hours, 4 clock hours

The objectives and techniques of teaching music in the first six grades are examined. The student is led to think of music in terms of the elementary school child. Observation of actual classroom situations parallels the study.

Music 210. The Symphony (Elective)

3 semester hours, 3 clock hours

Beginning with the Viennese symphonists, the course traces structural and stylistic changes of the symphony to the present time.

Music 215. The Opera (Elective)

3 semester hours, 3 clock hours

Several works from the standard operatic repertoire are examined. In addition, the student becomes familiar with some of the significant trends in modern opera.

Music 217. History of Music (Elective)

3 semester hours, 3 clock hours

Music since the Middle Ages is studied as one of the humanities, with attention to the interaction of music and society and to the relationships of music to the other arts.

Music 220. Twentieth-Century Music (Elective)

3 semester hours, 3 clock hours

Modern idioms and aesthetic notions are examined, together with relationships with the past.

NURSING

Nur. 100. Introduction to Nursing

2 semester hours, 2 clock hours

Historical and socio-cultural factors which have influenced the development of nursing as a profession are considered. The professional responsibilities and privileges of the nurse in the United States today are analyzed.

Nurs. 200. Foundations of Nursing I.

4 semester hours, 7 clock hours

This course presents the broad concepts of patient-care. The student learns basic nursing skills, which may be applied to all nursing situations. Emphasis is placed on health teaching of the patient and his family. Planned clinical experience is provided.

Nurs. 201. Foundations of Nursing II.

4 semester hours, 7 clock hours

This is a continuation of Nurs. 200. **Foundations of Nursing I.**

Nurs. 202. Nutrition.

3 semester hours, 3 clock hours

This course includes the study of the basic elements of the science of nutrition. Food requirements are related to individual need. Budgeting, food purchasing, menu planning, selection, preparation, and serving of basic foods are considered.

Nurs. 210. Medical-Surgical Nursing.

14 semester hours, 26 clock hours

The student learns to identify, analyze, and help solve nursing care problems based on the needs of patients as individuals. The common medical-surgical conditions are considered. Included are dietary treatment and pharmacology. Experience in the clinical field is provided concurrently.

Nurs. 211. Maternity Nursing

7 semester hours, 13 clock hours

This course includes consideration of the maternity cycle as a family affair. The care of the infant is learned concurrently. The role of community services and agencies in providing maternal and infant health supervision is included. Clinical experience is provided.

Nurs. 212. Pediatric Nursing

7 semester hours, 13 clock hours

The growth and development of the normal child is related to nursing care of sick children. Clinical experience is provided in specialized areas including both the hospital and the community.

Nurs. 213. Psychiatric Nursing

7 semester hours, 13 clock hours

The student is guided toward an understanding of the mentally ill and their treatment. It is emphasized that the principles of mental health learned in this experience are applicable to other life situations. Clinical nursing is provided.

Nurs. 220. Public Health Science

3 semester hours, 3 clock hours

The principles and practice of public health on a local, state, national, and international level are presented. This includes the areas of epidemiology, statistics, maternal and child health, health education, communicable disease, laboratory service, and environmental sanitation.

Nurs. 221. Public Health Nursing

7 semester hours, 13 clock hours

The student nurse is introduced to the functions of the nurse in community health. Field practice is made available in cooperation with qualified public health agencies where the student has the opportunity to observe and practice the principles of public health nursing.

Nurs. 222. Advanced Medical-Surgical Nursing

7 semester hours, 13 clock hours

This is a continuation of **Nurs. 210. Medical-Surgical Nursing.**

Nurs. 223. Disaster Nursing

2 semester hours, 2 clock hours

This course presents the basic principles of first aid and emergency care, an understanding of the effects of a major disaster civilian or military, and the nurse's role in the management of a large group of injured persons.

Nurs. 225. Principles of Management

3 semester hours, 3 clock hours

The basic elements and principles of management are studied, with consideration of their application to the practice of nursing and to beginning leadership positions in nursing.

Nurs. 230. Nursing Seminar

2 semester hours, 3 clock hours

This course is a survey of the current trends and problems confronting nursing as a profession. The role of the nurse as both an individual and a participant in organizations and groups concerned with these problems is considered.

PHILOSOPHY

Phil. 203. Introduction to Philosophy

3 semester hours, 3 clock hours

This course utilizes the "problem method" because of its value in arousing thought on the facets of reality. The student's perspective should not be mere problem-solving, but rather a deeper insight into "being" as expressed in metaphysics, epistemology, and ethics.

Phil. 204. Philosophy of Education

3 semester hours, 3 clock hours

The purpose of this course is to furnish a guide to the philosophical treatment of educational problems. This course seeks solutions of educational problems by employing the synoptic, critical, and systematic areas of philosophy.

PHYSICAL EDUCATION AND RECREATION

P.E. 106. Physical Education (Women)

1 semester hour, 2 clock hours

Opportunity is given for the individual to participate in a variety of healthful activities for the achievement of general physical development and particular fundamental skills. Introductory study is made of basic rules of hygiene derived from contemporary medical knowledge.

P.E. 101. Physical Education (Women)

1 semester hour, 2 clock hours

This continuation of the basic course includes activities such as tennis, archery, badminton, basketball, and folk dancing. Emphasis is placed on the acquisition of a general knowledge of team games as well as the development of individual skills and the elements of fair play.

P.E. 102. Physical Education (Men)

1 semester hour, 2 clock hours

Opportunity is provided for the individual or group to engage in a variety of healthful activities and thereby acquire the fundamental skills essential for intramural and recreational programs such as basketball, soccer, softball, tennis, and touch football.

P.E. 103. Physical Education (Women)

1 semester hour, 2 clock hours

Additional opportunity is offered to acquire advanced skills in folk dancing, individual sports, basic apparatus technique, stunts, and self-testing events. Provision is also made for the pursuit of chosen athletic interests.

P.E.104. Physical Education (Men)

1 semester hour, 2 clock hours

This physical fitness program is designed to meet individual needs and prescribe remedial activities to improve and maintain physical tone.

P.E. 105. Physical Education (Women)

1 semester hour, 2 clock hours

Physical Education activities are elected on the basis of both individual and group interest.

P.E. 106. Physical Education (Men)

1 semester hour, 2 clock hours

General physical development is maintained through individual skills that have recreational value, such as badminton, fencing, handball, and horseshoes.

P.E. 108. Physical Education (Men)

1 semester hour, 2 clock hours

This continuation of Physical Education 106 provides additional opportunity for the regular pursuit of chosen athletic interests.

P.E. 110. Physical Education in the Elementary School

1 semester hour, 2 clock hours

This theory and practice course is designed to guide the classroom teacher in organizing a comprehensive program of physical education activities based upon physiological, sociological, and psychological needs of elementary children with practice teaching of stunts, tumblings, and rhythmic.

P.E. 111. Physical Education in Special Education

1 semester hour, 2 clock hours

This course is designed to guide the special education teacher in organization and teaching of physical education activities suitable for mentally retarded children.

P.E. 202. First Aid

0 semester hour, 1 clock hour

The official Red Cross Standard course is required of students in all curricula except Nursing.

P.E. 203. Health Education (Elective)

3 semester hours, 3 clock hours

This course offers a study of the structures and functions of the physical systems of the body, and of the application of this knowledge to essential programs of personal, school, and community hygiene.

P.E. 209 Swimming (Elective for Women)

3 semester hours, 3 clock hours

This course is designed for students desiring to increase their swimming and diving skills, and to learn the basic techniques of teaching synchronized swimming and life-saving, competitive swim meets, aquatic pageants, and water ballets.

PSYCHOLOGY

Psych. 101. General Psychology

3 semester hours, 3 clock hours

This study of the science of human behavior deals with the scientific method, maturation, motivation, emotions, sensation, perception, learning, personality, and adjustment.

Psych. 202. Adolescent Psychology

3 semester hours, 3 clock hours

The psychological significance of factors in the adjustment of the adolescent to his peers, family, school, and society is studied.

Psych. 203. Educational Measurements

2 semester hours, 2 clock hours

This is a study of basic statistical concepts and techniques used in appraising pupil achievement, aptitude, and personality. Practical application of teacher-made tests, standardized tests, and other evaluative instruments is included.

Psych. 204. Child Psychology

3 semester hours, 3 clock hours

This introductory phase of the professional sequence is devoted to a study of how the child develops in all aspects of his personality for which the teacher has guidance responsibilities.

Psych. 206. Human Growth and Development

3 semester hours, 3 clock hours

This is a foundation course covering the development of man from conception through senescence. The relationship of the physical, social, emotional, and cultural is stressed.

Psych. 208. Educational Psychology

3 semester hours, 3 clock hours

The nature and fundamental principles of learning form the basis of this course. Procedures and conditions which make for efficient learning and retention are analyzed.

Psych. 215. The Use of Tests in Counseling (Elective)

3 semester hours, 3 clock hours

This course studies the predictive value of tests in counseling individuals through application of techniques in analyzing and interpreting data from individual and group testing.

Psych. 216. Mental Hygiene (Elective)

2 semester hours, 2 clock hours

This course considers the factors governing the adjustment of the individual to his environment particularly in relation to mental, physical, emotional, and social development.

Psych. 217. Psychology of Interpersonal Relations (Elective)

3 semester hours, 3 clock hours

This course will study psychological constructs and concepts in their application to various aspects of the interaction of human beings with each other.

Psych. 218. Measurement of Intelligence

3 semester hours, 3 clock hours

The nature of intelligence is studied by means of research and administration, scoring, and interpretation of both individual and group instruments.

Psych. 220. Psychology of Thinking

3 semester hours, 3 clock hours

This course considers psychology of thought in relation to the principles of reasoning and the study of meaning.

Psych. 225 The Society of Children

3 semester hours, 3 clock hours

A study of growth in perception, language, expression and interests of children of nursery school, kindergarten, and the middle years of childhood, involving lectures, observation, discussions, and conferences. **Prerequisites:** Psych. 101. and Psych. 204.

SCIENCE**I. PHYSICAL SCIENCE****Sc. 110 and 111. Physical Science I and II**

3 semester hours, 3 clock hours (each semester)

A survey of the broad areas of the physical sciences is included. Emphasis is placed on the use of the scientific method in the logical development of scientific concepts.

Sc. 112. I. A. Physics

3 semester hours, 4 clock hours

Basic laws of physics are studied in the areas of mechanics, heat, light, sound, electricity, magnetism, and radioactivity. Required of Industrial Arts sophomores.

Sc. 113. I.A. Chemistry

3 semester hours, 4 clock hours

In this study of the fundamentals of chemistry, material selected from both the inorganic and organic fields is included. Modern chemical processes and products are emphasized. Required of Industrial Arts sophomores.

Sc. 114. Chemistry I

3 semester hours, 4 clock hours

In this systematic study of the fundamentals of chemistry, applications in inorganic chemistry are included. Special attention is given to problems in physiological chemistry.

Sc. 115. Chemistry II

3 semester hours, 4 clock hours

A systematic study of the chemistry of carbon compounds at the pre-professional level, with special attention to problems in physiological chemistry. **Prerequisite:** Sc. 114 or its equivalent.

Sc. 116. Physics

3 semester hours, 4 clock hours

Laws of mechanics, heat, light, sound, electricity, magnetism, and nuclear physics are taught.

ELECTIVE AND SPECIAL FIELD REQUIREMENTS

Candidates for secondary teaching certificates in General Science (Physical Science emphasis) must select courses from those listed below to complete a minimum of 18 semester hours of credit in the field. The Physical Science faculty in charge of counseling students in the field may prescribe additional courses in the field.

Students of other curricula also may elect, under guidance, the following courses:

Sc. 210-A and 210-B. General Chemistry I and II

3 semester hours, 4 clock hours (each semester)

This course includes a study of the fundamental laws and theories of chemistry such as atomic structure, the periodic table, electrochemistry, descriptive inorganic chemistry, and chemical binding. A very brief introduction to organic chemistry is included. Chemical calculations are emphasized.

Sc. 211-A and 211-B. General Physics I and II

3 semester hours, 4 clock hours (each semester)

With the aid of experiments and problems, a study is made of the laws and formulas in the major areas of physics, mechanics, heat, light, sound, electricity, magnetism, and atomic physics.

Sc. 212. Physical Science III

3 semester hours, 3 clock hours

Approximately two-thirds of this course is concerned with the solar system, local and outer galaxies, and the modern tools and methods of astronomy; while approximately one-third of this course deals with "physics of the air" as a background for meteorological understanding.

Sc. 213. Organic Chemistry

3 semester hours, 4 clock hours

Included in this course are a systematic study of the chemistry of carbon compounds, and a brief introduction to biochemistry and the mechanistic approach to organic chemistry. Aliphatic and aromatic families are covered.

Prerequisite : Sc. 210-A and 210-B or the equivalent

Sc. 214. Geology

3 semester hours, 4 clock hours

This is a survey course in physical and historical geology. Special attention is given to the evidence of recent glaciation in New England. Laboratory work includes field trips, study of rocks, minerals, and fossils.

Sc. 215. Modern Physics

3 semester hours, 3 clock hours

This course deals mainly with developments in physics since the discovery of Becquerel rays in 1896. Thus it includes the study of subatomic particles, quantum theory, and nuclear reactions. Classical physics is presented only when needed as background.

Prerequisite : Sc. 211-B.

The following courses may also be counted toward a secondary teaching certificate in General Science. See Social Studies Department listings for course descriptions.

II. BIOLOGICAL SCIENCE

Sc. 100. Biology I

3 semester hours, 4 clock hours

This course includes a survey of living organisms—their relationships to each other and to man. Plants and animals included are those commonly encountered in New England. Field work and laboratory work supplement the study.

Sc. 102. Biology II

3 semester hours, 4 clock hours

In this course, the functioning and structure of the organ systems of animals are studied with emphasis on the human organism. Laboratory work supplements the study, with dissections of locally available materials and one mammal.

Sc. 105 and 106. Anatomy and Physiology I and II

3 semester hours, 4 clock hours (each semester)

This course provides the fundamental concepts for understanding the structure and function of the normal body. Methods employed are lecture, discussion, laboratory experience, and visual aids.

ELECTIVE AND SPECIAL FIELD REQUIREMENTS**II. BIOLOGICAL SCIENCE****Special Field Requirements**

Regular candidates for secondary school teaching certificates in Biology will be programmed with a required sequence of biology courses in zoology, botany, field studies, biological laboratory techniques, and two germane courses. In addition, there is a required sequence of physics and chemistry deemed essential in the preparation of biology teachers. These sequences will provide certification requirements for the biology and general science licenses.

Students of other curricula also may elect, under guidance, the following courses:

Sc. 201. Invertebrate Zoology.

3 semester hours, 4 clock hours

This course deals with the major phyla of invertebrate animals. A wide variety of animals is used for laboratory study. Lectures are coordinated with laboratory studies, and the emphasis is on zoological principles and relationships.

Sc. 202. Vertebrate Zoology

3 semester hours, 4 clock hours

In the study of representative fish, amphibians, reptiles, birds, and mammals, emphasis is placed on ecologic and economic factors. Field trips supplement classwork with emphasis on life-histories, natural habitats, feeding, maintenance, and classroom use of the vertebrates.

Sc. 203. Literature in the Natural Sciences

3 semester hours, 3 clock hours

This course is aimed at enlarging the student's acquaintance with the wide variety of published material in the natural sciences. Evaluation of literature from the standpoint of reading for enjoyment, scientific accuracy, and research purposes is stressed.

Sc. 204. Biological Laboratory Techniques

3 semester hours, 4 clock hours

This course includes a comprehensive study of the experiments, demonstrations, and aids which are useful in illustrating the major principles and generalizations of Biology. Laboratory work supplements the formal study.

Sc. 206. Conservation of Natural Resources

3 semester hours, 4 clock hours

The proper use and management of fish and wildlife, recreation areas, soil, forests, and minerals are studied in the classroom and field. The course includes demonstrations, experience in woodlot management, and field trips to farms that practice conservation techniques.

Sc. 207. Field Natural History

3 semester hours, 4 clock hours

Field work is the basis of this course with lecture periods used to supplement and interpret data. Ecological factors as terrain, soil, climate and temperature, vegetation are studied as part of the inter-relationship of living things.

Sc. 208. Genetics

3 semester hours, 4 clock hours

This course includes a study of the history of evolutionary thought, the mechanics of heredity, environment and heredity acting on the organism, and the application of knowledge in the field to new and anticipated problems. Laboratory work supplements formal study.

Sc. 210. Entomology

3 semester hours, 4 clock hours

This is an introduction to the study of important orders and families of insects and their importance to man, with emphasis upon their structure and habits. Each student will be required to make a collection of local insects.

Sc. 220. Principles and Problems in Microbiology

3 semester hours, 4 clock hours

A study of the microbial world with special emphasis on the history and biological interrelationships of microorganisms. Such topics as molecular biology, viruses, reckettsias, bacteria, fungi, and pathogenic protozoa are studied with special attention to their morphological and functional characteristics.

Sc. 223. Plant Physiology

3 semester hours, 4 clock hours

The functions of plant cells, tissues, and other structures; water relations; absorption and translocation; metabolism; mineral nutrition; and plant development and growth are studied. **Prerequisites:** Chemistry I and Biology I.

Sc. 231. Botany I - Botany of Flowering Plants

3 semester hours, 4 clock hours

Lectures and laboratories include ecology, economic importance, morphology, and classification of representative species of flowering plants. Local forms are stressed.

Sc. 232. Botany II - Botany of Non-flowering Plants

3 semester hours, 4 clock hours

The emphasis in this course is on representative Thallophytes, their biology and their importance to man. Local Bryophytes and Pteridophytes are also briefly studied. Laboratory and field work supplement the lectures.

Sc. 238 Science in Elementary Education

3 semester hours, 4 clock hours

Topics for study will be selected from those science areas particularly applicable in elementary education. Both physical and biological science problems are studied. Emphasis is on experimentation, observation, and problem solving.

Sc. 239 Science in Special Education

3 semester hours, 4 clock hours

This course includes a study of selected biological and physical science areas which are suitable for teaching to mentally retarded children. Laboratory work supplements the formal study.

SOCIAL STUDIES

I. HISTORY

S.S. 100 and 101. History of Western Civilization I and II

3 semester hours, 3 clock hours (each semester)

This course is a survey of the development of civilization. It emphasizes the special characteristics and contributions of periods and peoples from primitive man to today.

S.S. 105. U.S. History and Constitution

3 semester hours, 3 clock hours

A selective, topical survey is presented of the major forces and movements which have been most important in the development of the American heritage from its beginnings to the present.

ELECTIVES AND SPECIAL FIELD REQUIREMENTS

The following courses are offered in regular rotation as electives. Candidates for secondary teaching certificates in Social Studies must select under guidance a total of 9 semester hours from the following lists to complete a total of 30 semester hours of credit in the field.

Candidates for secondary teaching certificates in history must select under guidance a total of 9 semester hours from the history group below to complete a total of 18 semester hours of credit in the field.

S.S. 203. History of the Middle Ages

3 semester hours, 3 clock hours

The political-cultural history of the Mediterranean and European world, from the fall of Rome to the Renaissance, is studied. Christendom and Islam, feudalism, the rise of the towns, and the cultural contributions of the regions and areas will be studied.

S.S. 206. U.S. History from the Period of Colonization to 1820

3 semester hours, 3 clock hours

The course presents the causes and events of exploration and settlement of North America; development of American institutions; struggles for the continent; winning of Independence; post-revolutionary political, economic, and social developments; and the conception of the constitution.

S.S. 207. Current World Affairs

3 semester hours, 3 clock hours

The course surveys the background, action, and consequences of two World Wars. It also studies the years following with a view toward a better understanding of present international relations through an analysis of contemporary forces and problems.

S.S. 235. U.S. History, 1820-1877

3 semester hours, 3 clock hours

The course traces the problems and developments of the Federal Union from the Missouri Compromise through Reconstruction. Special emphasis will be placed on the causes and effects of disunion.

S.S. 236. U.S. History, 1877 to Present

3 semester hours, 3 clock hours

The course will begin with the post-reconstruction period and detail the progress of American History to the present. Particular attention will be given to twentieth century economic and political developments.

S.S. 230. Comparative Government

3 semester hours, 3 clock hours

The material covered gives a comparative analysis of the various forms of government, their underlying philosophies and their differing political climates. The complete development of the American system receives special emphasis.

S.S. 238. European History from 1815 through World War I

3 semester hours, 3 clock hours

The topics treated include: the developments within the major European countries after the Congress of Vienna; the rise of nationalism and imperialism, the intellectual revolution; the causes and course of World War I; and the Treaty of Versailles.

S.S. 239. British History 55 B.C. - 1603 A.D.

3 semester hours, 3 clock hours

The Picts, Celts, Gaels, Angles, Saxons, Jutes, and Norman French are studied as components of British stock. Historical events from the Roman Conquest of Britain through the Elizabethan Era and the culture of Anglo-Saxon, Norman, Angevin, and Tudor periods are stressed.

S.S. 240. British History 1603 to the Present

3 semester hours, 3 clock hours

The following topics are studied: Stuarts, Cromwell, Restoration; development of limited monarchy; colonial wars and American Revolution; Industrial Revolution; Napoleonic Era; Victorian Age; development of trade and world empire; World War I; Britain and the peace; World War II; Britain in post-war world.

S.S. 248. Russian History to 1917

3 semester hours, 3 clock hours

The study begins with the first Slavs and the founding of the Kievan State, and continues with the Mongol, Muscovite, and Empire Periods through the 1917 Bolshevik Revolution. Social, political, economic, and other institutions of pre-Soviet Russia are considered.

II. GEOGRAPHY

S.S. 110. Introduction to Geography

3 semester hours, 3 clock hours

An introductory course in Geography is organized and presented to develop an understanding of and an appreciation for the interrelationships that exist between the physical and cultural elements of man's environment.

S.S. 210. Geography of The United States and Canada

3 semester hours, 3 clock hours

The Geography of the United States and Canada is organized on a regional basis, emphasizing the influence of topography, climate, soils, vegetation, transportation, and natural resources on the occupations and cultural development of each region.

ELECTIVE and SPECIAL FIELD REQUIREMENTS

Candidates for secondary teaching in Geography must select five of the courses listed below to complete a total of 18 semester hours of credit in the field. Students from other curricula may elect, under guidance, any of the courses listed below.

S.S. 212. Economic Geography

3 semester hours, 3 clock hours

This course presents the basic geographic factors that are involved in the production, distribution, and consumption of the major commodities of the world.

S.S. 213. Meteorology

3 semester hours, 3 clock hours

Meteorology deals with the laws and principles underlying atmospheric phenomena, weather analysis and forecasting, and the application of weather data to problems of agriculture, forestry, transportation, and health.

Sc. 214 Geology

3 semester hours, 3 clock hours

This course may be applied toward a secondary teaching certificate in Geography. See Science Department listings for description.

S.S. 214 Climatology

3 semester hours, 3 clock hours

Climatology presents a systematic study of the climatic regions of the earth and the interplay of latitude, pressure cells, mountain barriers, water bodies, ocean currents, and winds on the development of each climate type.

S.S. 216. Geography of Latin America

3 semester hours, 3 clock hours

This course presents the geography of the countries and colonies of Latin America: historical background and political status, physical and climatic regions, agricultural and economic position, and inter-American and international relations.

S.S. 217. Geography of Europe

3 semester hours, 3 clock hours

This regional analysis is based on the geographic elements that have influenced the evolution of the countries of Western Europe and have produced the national and international problems faced by European countries today.

S.S. 218. Geographic Influences in American History

3 semester hours, 3 clock hours

Oceans and coast, island and harbors, mountain barriers and gaps, weather and climate, soil and vegetation, native animals and natural resources are analyzed to show their influence on the exploration, colonization, and expansion of the United States.

S.S. 219. Political Geography

3 semester hours, 3 clock hours

Political Geography is the study of dependent and independent political units (colonies, protectorates, trust territories, commonwealths, and countries) boundary disputes, strategic areas, buffer zones, and international organizations.

S.S. 241. Geography of Asia

3 semester hours, 3 clock hours

Geography of Asia is a regional analysis based on the geographic factors that have played a part in the development of the internal and external problems facing the nations of Asia today.

S.S. 242. Geography of Africa and Australasia

3 semester hours, 3 clock hours

This course presents the economic, political, historical, and cultural development of the countries of Africa, Australia, New Zealand, and the South Pacific Islands in relation to the physical environment.

S.S. 243. Geomorphology

3 semester hours, 3 clock hours

Geomorphology is the study of land forms (mountains, plateaus, valleys, lakes, canyons, beaches, and caves) and their development through the action of physical agents: glaciers, surface water, underground water, wind volcanism, diastrophism, and waves.

III SOCIAL SCIENCES**S.S. 120. Introductory Economics**

3 semester hours, 3 clock hours

This course studies the organization and functions of economic society. It develops understanding of the processes of production, consumption, exchange, and distribution. Its topics include corporate enterprise, price theory, national income, money, credit, banking problems, finance, taxation, and politico-economic philosophies.

S.S. 220. Industrial Society

3 semester hours, 3 clock hours

This course studies the interrelationships of economics and sociology in our present technological society, including production; consumption; distribution of wealth; social problems in industry; government relationships with labor, capital, and management; and the interaction of science, industry, and the arts.

S.S. 221. Contemporary American Sociology

3 semester hours, 3 clock hours

The student is introduced to the science of social relations. Detailed study is made of social institutions and of interrelationships of sociology, economics, and anthropology, with special emphasis on the nature, functions, and problems of health service in our society.

S.S. 222. Social Institutions

3 semester hours, 3 clock hours

The course first presents a consideration of the basic principles of sociology. This is followed by a comprehensive study of social institutions in the light of the individual's relationships with contemporary culture.

SPECIAL EDUCATION**FOR THE TEACHING OF THE MENTALLY RETARDED****Ed. 208. Reading in Special Education**

3 semester hours, 3 clock hours

Current practices in reading instruction, materials, and diagnostic tests are studied with special attention to analyzing children's reading difficulties, examining preventive and remedial techniques, appraising current reading materials with emphasis on special-education curriculum adjustment. Classroom observation is included.

S.E. 204. Methods of Teaching the Mentally Retarded

5 semester hours, 5 clock hours

Emphasis is placed on experiences which will provide optimum conditions of growth for the mentally retarded child. Language arts, quantitative thinking, and evaluative techniques are developed.

S.E. 220. Domestic Arts

3 semester hours, 6 clock hours

This course of study of foods includes simple food selection and preparation, elementary nutrition, meal planning, and table service. Emphasis is also placed on quality, style, and care of clothing within the ability of the retarded child.

Psych. 222. Psychology of Subnormal and Unadjusted Children

4 semester hours, 4 clock hours

This course consists of a study of causes, classification and identification of the exceptional child. The role of the home, community, and the school in understanding the mentally retarded child is explored.

S.E. 230. Student Teaching

12 semester hours, 25 clock hours

Students are assigned to selected special classes for one semester. Each student gradually assumes full classroom responsibility guided by the cooperating teacher and college supervisor.

S.E. 234 Guidance

3 semester hours, 3 clock hours

This course deals with the role, the scope, and application of guidance services. The tools and techniques of individual counseling will be considered. Emphasis will be placed on the use of community resources by the classroom teacher.

S.E. 235. Occupational Information

3 semester hours, 3 clock hours

The uses of occupational information in vocational guidance and the most effective methods of presenting such information are analyzed. Sources of occupational literature, occupational studies, vocational surveys, and job analysis are considered.

In addition to the required college courses and to those above, the following courses, listed under their respective departments, are planned for students in the Special Education curriculum.

- Ed. 208. Reading in Special Education**
- Eng. 236. Children's Literature**
- I.A. 224, 227. Industrial Arts I, II**
- P.E. III. Physical Education in Special Education**
- Psych. 203. Educational Measurements**
- Psych. 222. Psychology of Subnormal and Unadjusted Children**
- Sc. 238. Science in Special Education**
- Ed. 240. Orientation to Teaching**

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